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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,125

10/20/2005

Michael Brauer

BRAUER

8456

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EXAMINER

SCHEUERMANN, DAVID W

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

01/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,125	Applicant(s) BRAUER, MICHAEL	
	Examiner DAVID W. SCHEUERMANN	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/20/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 3, 4, 6, 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 10/20/2008 have been fully considered but they are not persuasive. Applicant asserts that, " While MacDonald shows a capacitance connected between the motor and ground, this is not an intentionally placed capacitor, but according to the analysis described with reference to Figs. 5 and 6 of MacDonald represents the stator winding-to-frame capacitance C_{sf} which is a spurious capacitance inherent in the motor design and NOT an additional component in the motor, as proposed in the present invention." The Examiner disagrees with this assertion for three reasons: 1) the capacitor is not labeled as such, note in figures 4 and 5 the stator winding to frame capacitance is labeled accordingly; 2) the capacitor is shown **outside** the motor frame connecting the motor frame to the ground wherein the stator winding-to-frame capacitance C_{sf} would lie **inside** the motor frame; and 3) Table I compares the "Total Filter Power Loss" using the ASD without filter, with a conventional filter and with the proposed filter. **Both the conventional filter and proposed filter show a capacitor coupling of the motor frame to the chassis ground.** Thus, a proper rejection has been made and is accordingly maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schluter et al., US 5294853 in view of MacDonald et al.: "A practical guide to understanding bearing damage related to PWM drives". Schluter et al., US 5294853 shows:

A traction drive system in a vehicle with an electric or diesel-electric drive, comprising:

A housing;

A traction motor received in the housing; and

[At least one grounding capacitor for grounding the traction motor.]

Schluter et al., US 5294853 do not expressly disclose, the bracketed features. MacDonald et al.: "A practical guide to understanding bearing damage related to PWM drives" discloses use of a grounding capacitor, for the purpose of reducing dv/dt , see figure 8b. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to employ a motor grounding capacitor as set forth by MacDonald et al.: "A practical guide to understanding bearing damage related to PWM drives". One of ordinary skill in the art would have been motivated to do this to reduce differential-mode common-mode dv/dt at the terminals of the motor.

Re claim 2, note the electronic power supply shown in MacDonald et al.: "A practical guide to understanding bearing damage related to PWM drives".

Re claim 5, note that the converter “realizes” the grounding connection with the ground as evidenced by Icm as shown in figure 8a of MacDonald et al.: “A practical guide to understanding bearing damage related to PWM drives”.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Schluter et al., US 5294853 and MacDonald et al.: “A practical guide to understanding bearing damage related to PWM drives” in view of Dschen, US 3176286. The combination of Schluter et al., US 5294853 and MacDonald et al.: “A practical guide to understanding bearing damage related to PWM drives” discloses the invention substantially as claimed as set forth in the rejection of claim 1, supra. The combination of Schluter et al., US 5294853 and MacDonald et al.: “A practical guide to understanding bearing damage related to PWM drives” does not expressly disclose, “...further comprising a motor shaft operated by the traction motor, and a bearing for support of the motor shaft, wherein the grounding capacitor monitors an electrical voltage across the bearing to generate a measured variable of an operative grounding connection.”. Dschen, US 3176286 discloses detecting voltage across a bearing to indicate a critical condition, see column 1, lines 19-26. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the critical condition sensor of Dschen, US 3176286 with the device of the combination of Schluter et al., US 5294853 and MacDonald et al.: “A practical guide to understanding bearing damage related to PWM drives”. One of ordinary skill in the art would have been motivated to do this to indicate a critical condition.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is (571) 272-2035. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached at (571) 272-8188. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dws
January 7, 2009

/Karl I.E. Tamai/
Primary Examiner, Art Unit 2834